

Claims

1. A method for the determination of carbohydrate-free transferrin in a body fluid for use in the assessment of alcohol consumption, said method comprising

(a) contacting a sample of said body fluid with a carbohydrate-binding ligand, to bind any carbohydrate or carbohydrate-containing moieties in said sample to said ligand;

(b) separating a fraction not binding to said ligand and

(c) determining the content of transferrin in said fraction.

2. A method as claimed in claim 1, wherein the sample is blood or a blood-derived sample.

3. A method as claimed in claim 1 or claim 2, wherein the carbohydrate binding ligand is selected from antibodies or fragments thereof, lectins and mammalian or microbial carbohydrate-binding proteins, or mixtures thereof.

4. A method as claimed in any one of claims 1 to 3 wherein in step (a) a panel of different lectins are used.

5. A method as claimed in any one of claims 1 to 4, wherein the carbohydrate binding ligand is selected from *Sambucus nigra* lectin, *Sambucus sielbodiana* lectin, wheatgerm agglutinin, *Maackia amurensis* lectin, *E. coli* K99 lectin, *Helicobacter pylori* lectin, *Ricinus communis* lectin, and *Crotalaria junctae* lectin, and anti-sialic acid antibodies, and mixtures thereof.

6. A method as claimed in any one of claims 1 to 5, wherein the separation step (b) is by precipitation, centrifugation, filtration or chromatographic methods.

7. A method as claimed in any one of claims 1 to 6, wherein the carbohydrate binding ligand is immobilised.

8. A method as claimed in any one of claims 1 to 7, wherein an ion exchange step to remove or deplete carbohydrate-carrying transferrins in the sample is performed prior to step (a).

9. A method as claimed in any one of claims 1 to 8, wherein the determination of transferrin content in step (c) is achieved by turbidometric or nephelometric means.

10. A kit for use in a method as defined in any one of claims 1 to 9, said kit comprising:

one or more carbohydrate-binding ligands; and
means for the detection of transferrin.

11. A kit as claimed in claim 10, wherein said means for detection of transferrin comprise an anti-transferrin antibody or antibody fragment; and preferably, an opacification enhancer.

12. A kit as claimed in claim 10 or claim 11, further comprising a transferrin solution of known concentration or a set of such solutions having a range of transferrin concentrations.

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